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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
KAU, STEVEN Y	

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2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary	Application No.	Applicant(s)	
	10/660,323	NELSON, TERRY M.	
	Examiner	Art Unit	
	STEVEN KAU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,21-27 and 29-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,21-27 and 29-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 April 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 9/22/2008, and has been entered and made of record. Claims 19, 20 and 28 are cancelled, and claim 1-18, 21-27 and 29-32 are pending for further examination in this Action.

Response to Remark/Arguments

2. Applicant's arguments with respect to claims 1-18, 21-27 and 29-32 have been fully considered and the reply to the Remarks/Arguments is in the following:

- Applicant's arguments, section "Rejection of the Claims Under 35 U.S.C. § 112", page 1, Remarks, with respect to 1-19, 29, 30 and 31 have been fully considered and are persuasive. The rejection of claims 1-19, 29, 30 and 31 under 35 U.S.C. § 112 First Paragraph has been withdrawn.
- Applicant's arguments, section "Rejection of the Claims Under 35 U.S.C. § 112", page 1, Remarks, with respect to 1-19 have been fully considered and are persuasive. The rejection of claims 1-19 under 35 U.S.C. § 112 Second Paragraph has been withdrawn.

With respect to section "Rejection of the Claims Under 35 U.S.C. §103", pages 1-7, Remarks, applicant's arguments are not persuasive and responsive to the arguments are respectfully presented as follows:

Applicant's arguments, "Wiebe discloses generating a printout of a section of a global position-coding pattern in a system comprising a computer unit and a printer unit connected to the computer unit. Wiebe, however does not teach or suggest a printer adapted to print a digital location pattern to be read by an optical reading device. Furthermore, Wiebe also fails to disclose a user interface component and a processing component adapted to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions, as admitted by the Office Action.

The Office Action alleges that the admitted deficiency of Wiebe is cured by Wang. However, Wang teaches correcting digital image signals for effects of printed dot overlap generated by a chosen printer prior to printing. Wang does not even hint a printer adapted to print a digital location pattern to be read by an optical reading device. Neither does Wang teach printing the digital location pattern to be read by an optical reading device and human-discernible content on the same carrier. While teaching converting handwritten notes to a digital format by a handheld device, the third reference, Ericson, also fails to cure the deficiencies of the first two references in rendering amended Claim 1 obvious. Therefore, Claim 1 is in condition for allowance, and notice to that effect is respectfully requested", pages 2-3, Remarks.

In re, the Examiner respectfully disagrees with the conclusion. First, "an optical reading device" in the amended claims is not cited in the claim body and thus it is just an intended for use device, but not a claim limitation, and thus it does not carry any patentable weight. Second, Wiebe indeed discloses a printer adapted to print a location pattern, or a position-coding pattern as called by Wiebe (Figs. 1, 4 & 5 and Pars. 52-56). Wiebe discloses a user interface component (**e.g. the computer monitor and keyboard of Fig. 1, thus, a user can interface with the system to modify position-coding pattern or inputting a graphical file for printing**) and a process component (**CPU of the computer in Fig. 1**) adapted to modify at least some of the dots prior to printing (**e.g. giving different shape of position-coding patterns, e.g. shape of rectangle, a planar curve and a polygon, etc in Pars. 75-78, and information defining within what limits the pattern can be changed, Par. 69 and "calculates mathematically the appearance of the pattern based on the boundary information" disclosed in Pars 0053 & 0057, a person of ordinary skill in the art understands that modifying the degree of offset of each dot from its nominal position can be done by calculating the appearance of the pattern based on the boundary information**). Since each claim limitation of claim 1 is taught by Wiebe in view of Wang and further in view of Ericson, claim 1 is not in an allowable condition. Dependent claims 2-18 are not allowable due to their dependency to claim 1. Claims 21, and 29-32 cite similar features of claim 1 and the above responds are also applied to the arguments presented by the applicant in page 4 of Remark. Claims 22-27 are not allowable due to their dependency to claim 21. Claim 32 has been rejected under 35

U.S.C. 101 in the previous Action. Claim 32 has been amended, however, the claim has not yet been amended to overcome the 35 U.S.C. 101 rejection, claim 32 rejection under 35 U.S.C. 101 is maintained and still stands.

The examiner changes new ground rejections for claims 21, 29, and 31-32 due to amendments. The examiner also references the applicant to the claims rejection section below for the explanation on how the prior art references read on the amended claims.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 32 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 32 is drawn to "a location pattern", which to be read by an optical reading device arranged for use with a system. "a location pattern", or "a pattern", is a printed matter, though seemingly a "manufacture". However, a "location pattern" is not a "manufacture", or "process", or "machine", or "composite of matter", rather, it is a printed matter, and thus is classified as a non-statutory subject matter, and is rejected as not being within the statutory classes. See MPEP 706.03(a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4, 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989).

Regarding claim 1.

Wiebe discloses a printer system (**System 100 of Fig. 1, Par. 47**) comprising a printer adapted to print a digital location pattern (**e.g. position-code pattern of Fig. 3, Par 50**) to be read by an optical reading device (**the underlined device is an intended use device and is not disclosed in the claim body, thus no patentable weight is given to this device**) comprising a plurality of dots (**e.g. position-coding pattern and the corresponding dots shown in Fig. 3, Par. 50**), each having a substantially predetermined size (**dot sizes identified as 601, 602 & 603 of Fig. 6, Par. 60**) and nominal position in the pattern (**e.g. dots positioning at above, below, right and left corresponding to raster position, Figs 2, and 3, Par 50**), the printer having a resolution constraining the position at which the dots are be printed (**Wiebe discloses resolution constraint, i.e. large dot size in a pattern would have high resolution and the patterns could join together, Par 62**), the system further comprising a user interface component (**e.g. computer monitor and keyboard of Fig. 1**) and a processing component (**e.g. CPU processor of system 100 of Fig. 1, Par. 47**);

wherein the printer is adapted to print said location pattern (**e.g. Printer 106 of Fig. 1 is used to print the said pattern, Par. 59**).

Wiebe does not explicitly disclose to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions, and human-discernible content on the same carrier.

Wang teaches modifying (**correcting**) at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions (**e.g. correcting dot overlapping and offsetting so that dots are centered in intersection of grid lines; Fig. 3, col 5, lines 20 through col 6, line 25 and col 9, lines 19-47**); and

Ericson teaches human-discernible content on the same carrier (**e.g. a note-book paper provides text 222, drawing 223, a send button 226, and an absolute position coding pattern 225 Fig 2a, Par 57, 58, 59 and 60**).

Having a printer system of Wiebe' 089 reference and then given the well-established teaching of Wang' 267 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the printer system of Wiebe' 089 reference to include modifying at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions as taught by Wang' 267 reference since doing so dot overlap and offset would be corrected by superimposing a virtual orthogonal grid or screen on the printed dots such that the center of each dot is coincident with the intersection

between orthogonal lines of the grid or screen (col 2, lines 53-57, Wang); and then would have modified the combination of Wiebe and Wang's reference to include human-discernible content on the same carrier as taught by Ericson, since doing so a user would be able to adjust, or to interpret or to interact i.e. press the "send button" to send out the message on the digital page conveniently (Par. 11), and further the teachings of Wang' 267 and Ericson' 989 could be implement able for one another with predictable results.

Regarding claim 2, in accordance with claim 1.

Wiebe discloses arranged to modify some of the dots prior to printing by changing shape of those dots from a nominal shape (**Paras 0016-0017 & Paras 0020-0026. "For a printout where a position-coding pattern's scale is adjusted in relation to an ideal pattern, the printer unit is preferably arranged also to adjust the scale of the printed-out information", a person of ordinary skill in the art understands that in order to print out an ideal pattern, dots must be adjusted from a nominal shape**).

Regarding claim 4, in accordance with claim 1.

Wiebe discloses the modification substantially does not alter the size of the dots (**e.g. dot size change could cause problem, Para 0062 and 0063**).

Regarding claim 6, in accordance with claim 1.

Wiebe discloses wherein the nominal position of each dot of the pattern lies offset in one of a plurality of directions, such as above, below, to the left and to the right,

from the intersection point of a virtual grid (**e.g. dots above, below, to the right and to the left of raster position, Para 0050**).

Regarding claim 14, in accordance with claim 1.

Wiebe discloses wherein the printer is a digital printer (**Printer 106 of Fig. 1, Para. 0047**).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 1, and further in view of Rylander (US 5,253,084).

Regarding claim 3, in accordance with claim 1.

Wiebe does not expressly teach that arranged to modify some of the dots prior to printing by introducing an asymmetry into the shape of those dots.

Rylander teaches that arranged to modify some of the dots prior to printing by introducing an asymmetry into the shape of those dots (**e.g. introduce asymmetry into halftone patterns to avoid redundant threshold value, col 11, lines 30-36**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include that arranged to modify some of the dots prior to printing by introducing an asymmetry into the shape of those dots taught by Rylander' 084 to avoid redundant threshold values and promote more homogeneous growth among the dots in halftone cell.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267), Ericson (US 2002/0011989), and further in view of Rylander (US 5,253,084) as applied to claim 3 above, and further in view of Iwata et al (Iwata) (US 4,955,736).

Regarding claim 5, in accordance with claim 3.

Wiebe differs from claim 5, in that he does not expressly teach wherein the modified dot shape is substantially an "L" shape or substantially a "T" shape.

Iwata teaches wherein the modified dot shape is substantially an "L" shape or substantially a "T" shape (Figs. 5A-F & 6A-F, col 6, lines 9-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include that the modified dot shape is substantially an "L" shape or substantially a "T" shape taught by Iwata to prevent the thin or broken printed portion from occurring in printing (col 3, lines 16-20).

9. Claims 7, 8, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 6 above, and further in view of Amato (US 5,175,694).

Regarding claim 7, in accordance with claim 6.

Wiebe does not expressly teach wherein the modification of the dots has the effect of moving the optical centre of gravity of those dots in a first direction, towards or away from their nominal positions.

Amato teaches wherein the modification of the dots has the effect of moving the optical centre of gravity of those dots in a first direction (X-direction), towards or away from their nominal positions (Fig. 3, col 2, lines 46 through col 3, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified combination to include the modification of the dots has the effect of moving the optical centre of gravity of those dots in a first direction, towards or away from their nominal positions taught by Amato for target tracking purpose (col 1, lines 52-53).

Regarding claim 8, in accordance with claim 7.

Wiebe does not expressly teach wherein the modification of the dots has the additional effect of moving the optical centre of gravity of those dots in a second direction, perpendicular to the first direction.

Amato teaches wherein the modification of the dots has the additional effect of moving the optical centre of gravity of those dots in a second direction (Y-Direction), perpendicular to the first direction (Fig. 3, col 2, lines 46 through col 3, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include the modification of the dots has the additional effect of moving the optical centre of gravity of those dots in a second direction, perpendicular to the first direction taught by Amato for target tracking purpose (col 1, lines 52-53).

Regarding claim 9, in accordance with claim 7.

Wiebe discloses wherein dots offset from intersection points of a virtual grid in a first direction have a different shape and/or size compared to dots offset from intersection points of a virtual grid in a second direction (Para. 0061).

Regarding claim 10, in accordance with claim 7.

Wiebe discloses wherein dots offset from intersection points of a virtual grid in a first direction have a different shape and/or size compared to dots offset from intersection points of a virtual grid in a second direction (Para 0048).

10. Claims 11, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267), Ericson (US 2002/0011989) and further in view of Amato (US 5,175,694) as applied to claim 10 above, and further in view of Yosefi (US 6,509,903).

Regarding claim 11, in accordance with claim 10.

Wiebe does not expressly teach wherein dots offset in the first direction are rotations of dots offset in the second direction.

Yosefi teaches wherein dots offset in the first direction are rotations of dots offset in the second direction (col 3, lines 66 through col 4, line 50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein dots offset in the first direction are rotations of dots offset in the second direction taught by Yosefi to prevent jagged edges in printing (col 4, lines 10-15).

Regarding claim 12, in accordance with claim 11.

Wiebe does not expressly teach wherein dots offset in the first direction are reflections of dots offset in the second direction.

Wang teaches wherein dots offset in the first direction are reflections of dots offset in the second direction (Fig. 7, col 5, lines41-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include dots offset in the first direction are reflections of dots offset in the second direction taught by Wang to simplify independent parameter calculations (col 6, lines 5-16).

Regarding claim 13, in accordance with claim 12.

Wiebe does not expressly teach wherein dots offset in the first direction are combined rotations and reflections of dots offset in the second direction.

Yosefi teaches wherein dots offset in the first direction are rotations of dots offset in the second direction (col 3, lines 66 through col 4, line 50); and

Wang teaches wherein dots offset in the first direction are reflections of dots offset in the second direction (Fig. 7, col 5, lines41-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to first include wherein dots offset in the first direction are rotations of dots offset in the second direction taught by Yosefi to prevent jagged edges in printing (col 4, lines 10-15, Yosefi), and then to have modified Wiebe to include wherein dots offset in the first direction are reflections of dots offset in the second direction taught by Wang to simplify independent parameter calculations (col 6, lines 5-16, Wang).

11. Claims 15, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 14 above, and further in view of Rhoads et al (Rhoads) (US 7,054,463).

Regarding claim 15, in accordance with claim 14.

Wiebe does not expressly teach wherein the printer also functions as a photocopier.

Rhoads teaches wherein the printer also functions as a photocopier (col 4, lines 8-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include the printer also functions as a photocopier taught by Rhoads to provide detecting and examining feature in the banking industry (col 4, lines 8-21).

Regarding claim 16, in accordance with claim 14.

Wiebe does not expressly teach wherein the printer is an inkjet printer, a LED printer, a LCD printers, or a liquid electrophotographic printers.

Rhoads teaches wherein the printer is an inkjet printer, a LED printer, a LCD printers, or a liquid electrophotographic printers (col 2, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein the printer is

an inkjet printer, a LED printer, a LCD printers, or a liquid electrophotographic printers taught by Rhoads because of the low printer cost (col 2, lines 1-2).

Regarding claim 17, in accordance with claim 14.

Wiebe does not expressly teach wherein the printer has a resolution approximately between 600 and 1200 dpi.

Rhoads teaches wherein the printer has a resolution approximately between 600 and 1200 dpi (col 2, lines 1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein the printer has a resolution approximately between 600 and 1200 dpi taught by Rhoads because of the low printer cost (col 2, lines 1-2).

12. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 1 above, and further in view of Murl (US 6,379,779).

Regarding claim 18.

Wiebe does not expressly teach wherein the dots are printed in IR absorbing ink.

Murl teaches wherein the dots are printed in IR absorbing ink (col 1, lines 40-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein the dots are

printed in IR absorbing ink taught by Murl to provide security for document reproduction (col 1, lines 40-53).

13. Claims 21-27, 29 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Rylander (US 5,253,084), and further in view of Wang (US 5,469,267) and Ericson (US 2002/0011989).

Regarding claim 21.

Wiebe discloses a method of generating a digital location pattern comprising a plurality of dots (**e.g. position-coding patterns of Figs. 2 and 3, Par. 50**) to be read by an optical reading device (**the underlined device is an intended use device and is not disclosed in the claim body, thus no patentable weight is given to this device**), comprising the steps of: determining the nominal position of the dots in a pattern area (e.g. position-coding pattern of **Fig. 3, determining dots in above, below, to the right and to the left corresponding to raster position, Pars. 50 and 51**), in dependence upon the characteristics of given printer, such that when printed (**e.g. generating graphical information in the printer unit and print out position-coding patterns with greater precision implies dependence upon characteristics of given printer, Pars. 12, 13 and 52**).

Wiebe differs from claim 21, in that he does not expressly teach that assigning an asymmetrical shape to at least some of the dots in the pattern area, the optical centre of gravity of those dots substantially coincides with the corresponding nominal positions,

wherein said location pattern is adapted for printing with human-discernible content on the same carrier.

Rylander (US 5,253,084) teaches that assigning an asymmetrical shape to at least some of the dots in the pattern area (**see discussion in claim 3 above, col 11, lines 30-36**); and

Wang teaches that when printed, the optical centre of gravity of those dots substantially coincides with the corresponding nominal positions (**Figs. 2 & 3, col 5, lines 1 through col 6, line 25 and col 9, lines 19-47**); and

Ericson teaches wherein said location pattern is adapted for printing with human-discernible content on the same carrier (**Fig 2a, Par 57, 58, 59 and 60**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include assigning an asymmetrical shape to at least some of the dots in the pattern area, in dependence upon the characteristics of given printer taught by Rylander' 084 to avoid redundant threshold values and promote more homogeneous growth among the dots in halftone cell; then to have modified Wiebe and Rylander to include when printed, the optical centre of gravity of those dots substantially coincides with the corresponding nominal positions taught by Wang to position and orientating dot patterns with respect to intersection of two orthogonal grid lines (col 4, lines 15-27, Wang); and finally to have modified the combination of Wiebe, Rylander and Wang to include wherein said location pattern is adapted for printing with human-discernible content on the same carrier as taught by

Ericson to allow user to interact or to interpret human-discernible content on the same carrier (Par. 11).

Regarding claim 22, in accordance with claim 21.

Wiebe discloses the step of requesting pattern information (**e.g. different displacements of dots in relation to a raster pattern code, Par 50**).

Wiebe does not disclose a pattern database.

Ericson teaches a pattern database (**database 431 of Fig. 6, Par. 95**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include a pattern database taught by Ericson since doing so would make data transfer flexible and would be possible to use a single server to keep track of different owners of certain services (Par. 102).

Regarding claim 23, in accordance with claim 21.

Wiebe teaches determining characteristics of the printer (**e.g. hardware and software of printer characteristics, e.g. printer printing formats such POSICRIPT format or PCL format, etc, Par. 52**); and, determining a necessity of the assigning step is required (**e.g. a process of printing position-coding pattern in Pars. 54-55, Figs. 4-5**).

Regarding claim 24, in accordance with claim 21.

Wiebe teaches the step of generating a print file of the pattern area (**e.g. graphical file, receiving boundary information from computer, Paras 0009 and 0030**).

Wiebe does not disclose at least some dots having the assigned asymmetrical shape.

Rylander teaches at least some dots having the assigned asymmetrical shape (**see discussion in claim 3 above, col 11, lines 30-36**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include at least some dots having the assigned asymmetrical shape taught by Rylander' 084 to avoid redundant threshold values and promote more homogeneous growth among the dots in halftone cell (col 11, lines 34-36).

Regarding claim 25, in accordance with claim 24.

Wiebe teaches the step of printing the print file on the given printer (Para 0030).

Regarding claim 26, in accordance with claim 1.

Wiebe discloses the step of explicitly defining the shape of the at least some of the dots in the native resolution of the printer (Para 0016),

Regarding claim 27, in accordance with claim 26.

Wiebe discloses wherein the shape of the at least some of the dots is defined using any one of a bit map, a font set, or a high level programming language (Para 0012 & 0030).

Regarding claim 29.

Claim 29 recites identical features as claim 21, except claim 29 is a system claim. Thus, arguments similar to that presented above for claim 21 are also equally applicable to claim 29.

Regarding claim 31.

Wiebe discloses a printer system (Figs 1, 4 & 5) adapted to print a digital location pattern to be read by an optical reading device **(the underlined device is an intended use device and is not disclosed in the claim body, thus no patentable weight is given to this device)** comprising a plurality of dots **(e.g. position-coding pattern comprising dots shown in Fig. 3, Par. 50)**, the dots having a first dimension lying between predetermined limits **(e.g. distance between two adjacent raster position is 300 µm, Fig. 3, Par. 50-51)**; a computing component of the system **(e.g. CPU of the computer system of Fig. 1)**; such that when printed on a pre-selected printer **(e.g. position-coding pattern is printed by the printing unit of Fig. 5, Par. 67)**;

Wiebe differs from claim 31, in that he does not expressly teach that each dot having an optical centre of gravity located at predetermined nominal positions in the pattern, introducing an asymmetry to the dot shape of selected dots, substantially without causing the first dimension to exceed its predetermined limits, the optical centre of gravity of the selected dots more closely coincides with their corresponding nominal positions, and human-discernible content on the same carrier.

Wang teaches that each dot having an optical centre of gravity located at a predetermined nominal positions in the pattern **(e.g. correcting dot overlapping and offsetting so that dots are centered in intersection of grid lines; Fig. 3, col 5, lines 20 through col 6, line 25 and col 9, lines 19-47)**; and

Rylander teaches that introducing an asymmetry to the dot shape of selected dots (**e.g. introduce asymmetry into halftone patterns to avoid redundant threshold value, col 11, lines 30-36**); and

Ericson teaches wherein human-discernible content on the same carrier (**e.g. a note-book paper provides text 222, drawing 223, a send button 226, and an absolute position coding pattern 225 Fig 2a, Par 57, 58, 59 and 60**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include that each dot having an optical centre of gravity located at a predetermined nominal positions in the pattern taught by Wang to position and orientating dot patterns with respect to intersection of two orthogonal grid lines (col 4, lines 15-27, Wang); then to have modified Wiebe and Wang to include assigning an asymmetrical shape to at least some of the dots in the pattern area, taught by Rylander to avoid redundant threshold values and promote more homogeneous growth among the dots in halftone cell; and finally to have modified the combination of Wiebe, Rylander and Wang to include wherein said location pattern is adapted for printing with human-discernible content on the same carrier as taught by Ericson to allow user to interact or to interpret human-discernible content on the same carrier (Par. 11).

Regarding claim 32.

Claim 32 recites identical features as claim 31, except claim 32 is a location pattern claim. Thus, arguments similar to that presented above for claim 31 are also equally applicable to claim 32.

14. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Ericson (US 2002/0011989).

Regarding claim 30.

Wiebe discloses a printer system **(Figs. 1, 4, & 5)** adapted to print a digital location pattern to be read by an optical reading device **(see the discussion in claim 1 above)** comprising a plurality of dots each offset from a nominal position in one of a plurality of directions **(e.g. a position-coding pattern with dots above, below, to the left and to the right of the corresponding raster position and offset from grid lines as shown in Fig. 3, and par. 50)**, a computing component of the system **(e.g. the CPU of the computer system of Fig. 1)** being arranged to modify the degree of offset of each dot from its nominal position by modifying the shape of each dot **(Wiebe discloses different shape of position-coding patterns, e.g. shape of rectangle, a planar curve and a polygon, etc in Pars. 75-78, and information defining within what limits the pattern can be changed, Par. 69 and "calculates mathematically the appearance of the pattern based on the boundary information" disclosed in Pars 0053 & 0057, a person of ordinary skill in the art understands that modifying the degree of offset of each dot from its nominal position can be done by calculating the appearance of the pattern based on the boundary information)**, and wherein said system is adapted to print a said location pattern **(the system of Fig. 5 is adapted to print the position-coding pattern, Par. 53)**.

Wiebe does not disclose human-discernible content on the same carrier.

Ericson teaches human-discernible content on the same carrier (**e.g. a note-book paper provides text 222, drawing 223, a send button 226, and an absolute position coding pattern 225 Fig 2a, Par 57, 58, 59 and 60**).

Having a printer system of Wiebe' 089 reference and then given the well-established teaching of Wang' 267 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the printer system of Wiebe' 089 reference to include human-discernible content on the same carrier as taught by Ericson' 989, since doing so a user would be able to adjust, or to interpret or to interact i.e. press the "send button" to send out the message on the digital page conveniently (Par. 11), and further the Ericson' 989 could be implement able for one another with predictable results.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on Monday to Friday, from 8:30 am -5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Steven Kau/
Examiner, Art Unit 2625
12/11/2008

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625